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Seasons in the sun

By Geof Wheelwright

"We've had joy, we've had fun, we've had seasons in the sun …" - Terry Jacks

This is my last issue as Editor of Performance PC Canada – and it's been a lot of fun I thank all of you readers who have been kind enough to write in and apologize to all those whose letters did not make it into the magazine – or to whom I did not reply personally

As I write this, I reflect on the fact is that life has become just too hectic overall And not just for me, but for everyone It's ironic that technology has played no small part in this

There was a time when technology was viewed as a tool to help people save time - or to be able to use the same amount of time to be productive But I'm not sure that it has turned out that way

In fact, I would suggest that it has become just the opposite Many people – me included – find it hard to create boundaries and structure in our lives because technology has exposed them as arbitrary

I'll give you a simple example I am writing this while I sit in a couch at 6:30 AM on a Saturday morning. In times past, it would have been difficult – if not impossible – for this way of working to make even the vaguest possible kind of sense Even if I used a portable typewriter, I would still have to get my copy to a typesetter, get it laid out on a page and then to the printers in time. Without a lot of exceptional running around and panic, it meant that I would have pretty much had to write and submit my work between the hours of 9 AM and 5 PM sometime between Monday and Friday.

No such boundaries exist these days The wonder of email, the Internet and electronic communication means that I can do my work anytime, anywhere and in almost any situation And that's where technology becomes a double-edged sword It is a sword that helps me to bring the barriers of traditional working life crashing down, but it also brings down the benefits of having the barriers

The notion that I have to be in the office to work – and that I don't do anything work-related when I am at home in the evenings or on the weekend – has no practical validity anymore With a notebook computer, virtually all my important office-related work is with me all the time And should I choose to pay attention to it during the evening or on a weekend, I can instantly send it off to whomever needs to see it.

So my work tends to get divided into two categories work that I have to do in the office (often involving other people with whom I need to work) and work that I can do at home (which typically involves writing) The catch is that this body of work is now probably larger than it was before technology came along. If I add up all the work that I do from home and add it to the work I do at the office, it comes out to a heck of a lot more hours than your standard 40 hour work week

And I suspect a lot of people are like me We want to do the best in our work and we take it home with us – perhaps not realizing that the more work we take home, the more of ourselves we leave at the office.

Take care and Happy Computing! ◗

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Gigabyte GV-R98P128D Radeon 9800 Pro 128 MB

Review by Edward Chang, techwarelabs.com

Introduction:

RADEON 9800 technology is available in four product configurations built by ATI RADEON 9800 XT, RADEON 9800 PRO 256MB, RADEON 9800 PRO 128MB and RADEON 9800 128MB

RADEON 9800 series of visual processors is the most visually advanced 3D performer on the planet, delivering an immersive, cinematic experience for the most demanding next-generation games with up to 256MB of DDR memory and a 256-bit memory interface Merging advanced stability with revolutionary features, RADEON 9800 series is the only Visual Processing family in its 3rd generation

At-a-glance:

- RADEON 9800 series is the ultimate accelerator of the most demanding next-generation 3D titles, scenes and environments
- Featuring highly programmable cinematic shader engines and support for the latest Microsoft DirectX 9.0 and OpenGL feature sets
- Experience unparalleled 3D visual realism with the advanced engineering of ATI technology
- RADEON 9800 series beats with the heart of a champion, backed by the latest CATALYST software suite

Today, we will look at Gigabyte's offering of the Radeon 9800 Pro dubbed the GV-R98P128D

GV-R98P128D

Chipset	Radeon 9800 PRO
Memory	128 MB
Mem Bus	256 bit
BUS	AGP 8X
Mem Type	DDR 4Mx32
D-SUB	Y
TV-OUT	Y
DVI Port	Y
MultiView	Y
Tools	V-Tuner
GAME	3
Software	Power DVD 5 0

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Being a forward looking technology company, GIGABYTE is in a position to build upon its main business of motherboards, graphics cards, and system platforms, whilst expanding its product line and services to include notebooks, servers, and networking communication products We hope to lead our customers onto the road of success

Let's take a look at the card.

The Card:

The Gigabyte Radeon 9800 Pro looks similar to the Radeon 9700 They're both red, use BGA memory, and have an external power connector.

The FIC Radeon A95P is equipped with 8-chips of Samsung 2 8-nanosecond DDR SGRAM This memory rating corresponds to a maximum operating frequency of 357 MHz (714 MHz DDR)

Time to check out the Radeon 9800's brethren and competition

Test System:

-AMD Athlon Barton 3200+
-EPoX 8RDA3+ Nforce2 Ultra400 motherboard (Provided by EPoX)
-KingMax 256 MB PC3200 DDR RAM (Provided by KingMax) @ Normal Setting
-Western Digital 80GB SE 7200 RPM UDMA 100 with 8MB Cache (Provided by Western Digital)
-Windows XP Professional SP1
-Gigabyte Radeon 9800 Pro

Drivers:

-ATi Radeon Catalyst 3.7
-DirectX 9 0
-Nvidia 3.13 Nforce Chipset Drivers

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-MadOnion 3DMark2001 Second Edition Patched

-Unreal Tournament 2003 dm-antalus, dm-anubis, dm-asbestos, ctf-citadel botmatch

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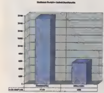
3DGaming Benchmarks:

-MadOnion 3DMark



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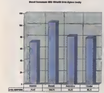

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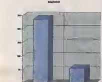

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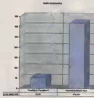

Conclusion:

The GV-R98P128D is no doubt an excellent card and has proven to be a great success. It's quality and performance is like a built-by ATI video card. The only problem we had with the video card was when testing the s-video out, the image output experienced some interference.

With the purchase of a GV-R98P128D you get plenty of extras, which include 3 full version games and an overclocking utility, DVD software, and all the cables you'll need. Moreover, you get one fast video card. Get yours today for around $400!

For this, we award the Gigabyte GV-R98P128D Radeon 9800 Pro our Recommended Product Award.

NVIDIA Nforce3 250gp chipset

By Babak Khonsari

PC's of last generation were basically used for word processing, spreadsheets, presentations and Internet applications such as email and browsing. Not much speed or bandwidth was needed to perform these operations. This is not the case for the new generation PC's. PC's are now required to do tasks such as video editing, 3D graphics, image processing, MP3, DVD playbacks, as well as Home networking as well as the older tasks.

Up until now, the motherboard chipsets have only acted as merely a connection medium between the major component systems. The full capabilities of the individual components were never fully utilized.

Enter the new Nvidia, Nforce3 250gp chipset that will be hitting the shelves sometime after summer. According to Nvidia, the new chipset will be handling memory management on chip. Actually it will be doing everything in a single chip- the MCP – less latency, less real estate, less noise, and less costs. It will also have native gigabit Ethernet with built in hardware firewall. The traditional gigabit Ethernet on PCI is slow, because PCI is shared, and it is limited to 133 MHZ. Now by putting the gigabit Ethernet on the MCP, you give it direct access to the CPU and hence achieve true wire speed. There will also be stateful and stateless packet inspection. The driver will do most of the work. One of the benefits of having a driver versus software-based firewall is that during boot there is a point at which XP is vulnerable, and with the driver-based firewall that is not anymore. There will also be utility software for audio mixing and system utility for over clocking from within windows.

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FileMaker 7 Review

By Douglas Alder

Product: FileMaker 7
Price: Street pricing $400, Upgrades are approximately $179
Requirements: 128 MBs RAM, Pentium 300 or G3 or higher.
Platforms: Windows XP, 2000 and Mac OS X
Publisher: FileMaker Inc. www.filemaker.com

FileMaker is a very user-friendly database that makes building complex database systems easy and quick to do even for relative beginners. It is ideal for workgroup, low-volume web database and personal projects.

New Relationship Map

What is new in this version of FileMaker? Unlike the incremental upgrades of 3 to 4, 4 to 5 and 5 to 6, FileMaker 7 is a major new approach. The file format has changed, as have a number of important design approaches. There is a new way to build data relationships, quickly and with much more flexibility through a relationship map.

In the new graphic relationship defining view, to link files, simply drag from a field in one table to a field in another table. To customize the link, double click on the line between the two tables. Within this relationship link there are a number of new types of relationships including Equals, Not Equals, Greater Than, Less Than, Greater Than or Equal To, Less Than or Equal to and the X operator, which links everything to everything. In addition, it is possible to combine these field relationships. This is a very powerful tool. For example, it is possible to link all records belonging to a customer, where the date is less than 90 days old, and the value is over a certain dollar figure.

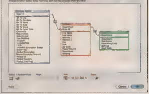

Figure 1: The new relationship diagram – just drag to link tables.

The relationships now allow linking through relationships. For example, in FileMaker 6 and previous, to make a link between Customers-Invoices-Line Items, you had to create additional calculation fields to make this link. Now there is an automatic drill-down connecting through multiple levels of the database. Relationships are also now two-way. There is no longer a need to create a relationship from each side of the table links.

Table occurrences are pointers to their source tables. As soon as you create more than one link between two tables, a new occurrence of the table will be spawned. These multiple occurrences are to prevent recursive relationships. This concept is a little tricky, but when you play with it after a while it makes sense.

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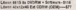

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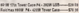

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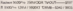

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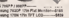

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Naming conventions become important because tables can have multiple layouts linked to them. For example in a database system that contained Companies, Contacts, Invoices and Line Items, you might name the layouts Company Data Entry, Company List View etc.

You can use colors on the table occurrences in the relationship graphs to help differentiate the types of relationships. You can also zoom in and out on the graph to help with more complex solutions. Within the relationship graph, there are align buttons to help clean up the look of the graph as well. There is also a useful print capability for the graph to help in planning and documentation.

Standard Terminology and Huge Capacity Increase

This version of FileMaker finally conforms to other major databases' terminology with respect to tables. Where before each FileMaker database file was a single data table and it was called a database, now a single database file can hold large numbers of tables. The developers have also taken away a number of limitations with respect to the size of various aspects of the database. Where before, a single field was limited to 64k of data, text fields can now hold up to 2 gigabytes of data. Overall database limits are now 8 terabytes of information, though no doubt you would need to have a fairly hefty processor and RAM to get any speed out of such a monstrosity.

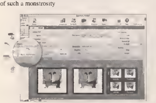

Figure 2: All manner of documents can now be stored inside FileMaker 7.

Document Management Capabilities

FileMaker can finally store BLOBs, or binary large objects. Where before, the database could store a number of graphic formats and PDFs, it can now handle virtually any file type. Imagine a document management system, containing Word, Excel or Quark files. Double clicking the image of the file in the database will download and open the file on your desktop.

Windows Management Improved

Window management has been greatly improved. In addition to much greater control of location and size of windows, it is now possible to open multiple windows of the same data. Where this comes in especially handy is managing multiple found sets of data. In the past, it took a lot of rigmarole, in programming to perform a search, then do something else, and get back to your previous data set. Now, it is just a matter of opening a new window.

More Robust Security Model

Up until now, FileMaker's security system was, to say the least, somewhat limited. With FileMaker 7, there is a robust and extensible security system employing Users, Passwords and Groups, which can be linked to your operating system security system. This means that a company's IT department can manage the Users and Passwords. The new security model also extends to web access.

Improved Web Functionality

FileMaker 7 has an amazingly improved capability to deliver databases to the web. In previous versions, FileMaker had something called Instant Web Publishing, but it was very limited. Most script steps would not work and as a result, many web developers simply went around it, using programs like Lasso or PHP. With FileMaker 7 it is now possible to create a database in FileMaker and with NO web programming, deploy your solution on the web. This is a big deal. Learning FileMaker is significantly easier than learning

Continue on page 22

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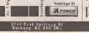

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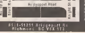

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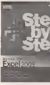

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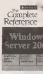

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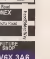

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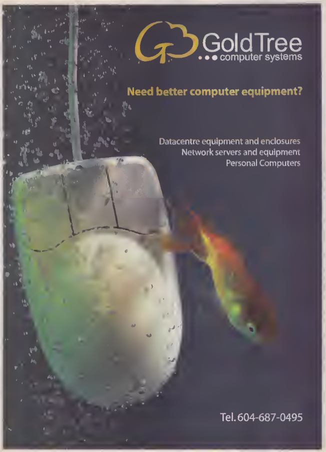

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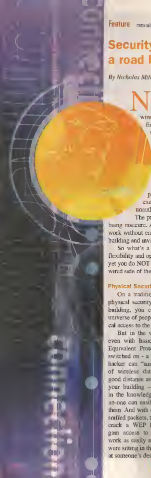
Security doesn't have to be a road block to wireless LAN deployment

By Nicholas Miller



Network administrators face a tough choice right now. On the one hand, they are facing increasing demand from users to provide WiFi-based wireless access to corporate email and the Web as the proliferation of wireless-enabled notebook computers continues apace. It's hard these days to find a business-class notebook that doesn't include support for wireless network access. And the trend is moving in the same direction for handheld computers, many of which are also now including WiFi as standard equipment.

Meanwhile, corporate management is becoming more and more concerned with privacy and security. A number of countries have also recently enacted onerous new privacy laws that require corporations to step strong measures to ensure the security of the data they hold about customers. In addition, competitive pressures and a proliferation of high-profile virus and "denial of service" attacks on corporations have left many executives deeply concerned about the prospect of anyone gaining unauthorized access to their corporate networks.

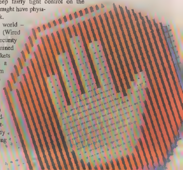
The problem, of course, is that wireless networks have gained a reputation as being insecure. And it is true that putting a wireless access point on your corporate network without enabling security on it is like hanging Ethernet cables out the windows of building and inviting one and all to drive into the parking lot and connect to your network.

So what's a good network administrator to do? You want employees to have the flexibility and opportunity to be productive for the company wherever they happen to be, yet you do NOT want to take the chance that all the work that you have done to secure the wired side of the network will be undone by providing wireless access.

Physical Security Only Part of The Answer

On a traditional wired network, access to the network could largely be limited by physical security. If you could keep an eye on everyone who came and went from the building, you could keep fairly tight control on the universe of people who might have physical access to the network.

But in the wireless world – even with basic WEP (Wired Equivalent Protocol) security switched on - a determined hacker can "sniff" packets of wireless data from a good distance away from your building – secure in the knowledge that no-one can easily spot them. And with enough sniffed packets, they can crack a WEP key and gain access to the network as easily as if they were sitting in the building at someone's desk.



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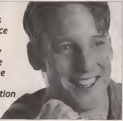

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So you need to be able to guard against a hacker who can sniff out a WEP key, someone who might steal a wireless device with an active WEP key (such as a handheld computer or notebook computer) and sloppy security policies that would allow people to leave WEP keys written on sticky notes beside their desk

All of this presupposes, of course, that network administrators will seriously consider using wireless solutions secured by WEP on their networks – and that, of course, is unlikely to be the case for all the reasons outlined above.

Certain hardware vendors would say that the solution is simple – junk any existing investment you may have in WEP-based 802.11b hardware and go with an all WPA-based wireless network with higher-end, "business class" access points from a limited number of manufacturers

Some analysts suggest that the solution is to wait This school of thought suggests that users should employ the WiFi hardware in their notebook and handheld computers to access "hot spots" in airports, train stations and hotels, but wait until their corporations have bulletproof, WPA-based wireless access security before expecting to be able to get wireless access within their own offices.

A Little Common Sense

Those options certainly represent possible answers, but it would seem that going with an all-WPA solution is going to cost your company a lot more money up front, And it is always going to delay the time when your company is going to be able to benefit from enjoying a wireless network Meanwhile, less timid competitors may be reaping with rewards of a wirelessly-enabled workforce

So what you really need is a common sense solution – one that recognizes that WEP has flaws, but makes the most of its core security technologies alongside good security policies for employees If you want to be able to start working more quickly with wireless networks based on WEP security, you need

- to use technology that will rotate your WEP keys regularly (so that they can be switched often enough that even a dedicated hacker would never have long enough to crack and use the current key)
- to distribute WEP keys securely and automatically (so that no individual user – or network administrator, for that matter - needs to know the key or enter it manually)
- to be able to implement all this using existing standard 802 11 hardware

The final part of a common sense solution is that you must not forget that every wirelessly-enabled notebook, Tablet PC or desktop computer in your organization can – with the right software – be turned into an insecure wireless access point

By establishing a connection to the network and "sharing" that connection wirelessly using a wireless "Ad-hoc" network mode, a user can turn his or her wirelessly-enabled computer into an access point

So whatever solution you implement has to be able to not only control the security of conventional access points, but also be able to govern the behaviour of wirelessly-enabled computers operating in Ad-hoc mode

So you cannot count on the fact that you have not officially rolled out a wireless network in your office as protection against someone gaining unauthorized wireless access to your network. An employee with, for example, a Centrino-based notebook computer can just as easily create a wireless loophole in your network security as someone buying a wireless access point and plugging it into your wired network.

The good news is that solutions to deal with these issues exist – such as Cirond's own Winc Manager wireless network management and security technology, which will detect and locate rogue access points, rotate WEP keys, provide wireless network load balancing and manage both Ad-hoc and standard wireless access point-based wireless networks. It, of course, not the only solution – and you will need to make your own determination about the right solution to help you meet this challenge But make no mistake - it must be met or your network security will be compromised ◗

Nicholas Miller is CEO of Cirond Corporation, a developer of specialist wireless network connectivity, management and security solutions

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Filemaker 7 Review

Continued from page 12

a language like PHP or ASP Anyone who has done a few Excel macros could now create a very powerful web database.

Speed used to be a real issue with web enabling a FileMaker database, because everything had to be filtered through a single-threaded client database. Soon, (with the release of FileMaker 7 Server) it will be possible to deploy it on a server, with up to 100 live sessions. Because FileMaker Server is still in beta, we have yet to see real world proof of how much faster this will be, but it hold exciting potential

If you are using the same machine for both client and web server a PC is significantly faster than a Mac Instant Web Publishing really does become a serious contender to replace FileMaker clients when used in this configuration.

In fact it is faster to host both on a PC than to host on a Mac and use the PC to access it. The reverse is also the case, hosting on a PC, access from a Mac It was noticeably slower that way as well My testing units were an 867 MHz G4 and a 2.4 GHz Intel 4. Guess I need a Mac G5, too bad the PC only cost $1000 and the G5 would be more like $4,000. On the plus side, the icons on the Mac are way cooler

For Beginners

For beginners, FileMaker includes about thirty nicely designed templates to get you started in a variety of common tasks Most of these databases are just updates of the existing FileMaker templates and they are single table solutions, though there are now at least a few examples of relationships On FileMaker's website, they do have a more complex example called The Business Tracker. It is a basic customer tracking and invoicing system. This is a good place to start for anyone with database experience with other database products Another nice feature that has been in FileMaker for a while is the ability to open Excel files with just a few clicks

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What's Else Has Changed?

FileMaker claims that there are over 100 new and enhanced features We didn't count them all, but here is a selection of useful things we found.

Despite all the changes, developers who are familiar with FileMaker's previous versions will be happy to know that most menu items are the same. It is still a familiar world Where the big changes start to appear is in the Define menu. Consolidated defining of fields, relationships and value lists.

Much is the same in the Define Fields area, except for the addition of a format called Timestamp, which is simply a combination of Time and Date, which improves compatibility with SQL databases. Globals no longer exist as a field type A Global setting is now in the storage options for most field types

Sorts can be set at the relationship level AND at the portal level. This will be a big plus for developers of complex solutions

FileMaker now supports PNG transparent graphics. It is possible to overlay irregular-shaped graphics and have transparencies through the graphics. Some interesting visual effects can be achieved with this capability

There is now an option to Not Save Record Changes Automatically The implication is that the database will now behave more like a web page Send the data, make changes, then send them back, on commit or submit. The old way with FileMaker as soon as field was exited, the change was made with no real undo capability.

Scripted Find, Sort and Print are a wonderful improvement In the past, these things were done first, then the state was scripted to be retrieved Changing them meant a convoluted process. Now, it is a simple edit

Things they left out

A way to organize as well as copy and paste in the Scriptmaker would be really handy. It would allow the easy transfer of scripts from one solution to another, or moving elements of a script out into a subscript, or vice versa. It has been possible for a while to import scripts, but it is not the most flexible approach.

Triggers would also be good. That is, when you leave a

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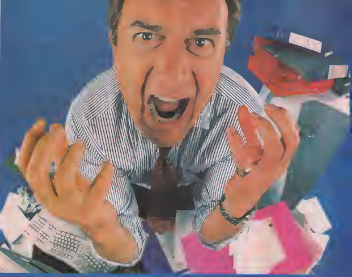

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Gigabyte Ga-8IK1100 /875P/S-478	$160
Gigabyte Ga-K8NF /nFDRCE3 150 /S-754	**$189**
Gigabyte Ga 7VT600PL /KT600/socket A	$83
Gigabyte Ga 7N400L /nForce2/socket-A	$95
Gigabyte Ga-K8VT800P VIA K8T800/socket-A	$145
MSI 865PE NEO2 PLS S 475/I865/	109
Aopen MX77M8XN KM400/Socket A/All in One	$89
Aopen MX46-800N SIS 661FX/S-475 All in One	$85
ASROCK K7S8X E SIS748 400FSB	$75

Memory Card

SMART MEDIA Flash Card 128	**$75**
Compact Flash 128/256/512MB	**$49/79/159**
MultiMedia Card 64/128MB	**$40/70**
Secure Digital 128/256/512MB	**$68/98/239**
XD-Picture Card 128/256MB	**$85/135**
Memory Stick 128/256 MB	**$78/139**
Sony Memory Stick DUO 64MB	**$139**

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Maxtor/Seagate 40/80/120GB 7200RPM	$75/$99/119
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ATI AIW 8500Pro 128mb (Retail)	$468
Radeon 9200SE 128MB oem	$68
Radeon 9600SE /9600 128MB (Sapphire)	$118/148
ATI Radeon 9800Pro 128MB(box)	$319
Gainward Geforce Fx5200DTL TVO/DVI 128MB	$85
Gainward Gainnas Fx5600XT 128	$135
Gainward Geforce Fx5700DT 128MB /Fx5700ETX 256mb	**$199/220**
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Casio EXP600	$779
Casio QVR-51 5 megapixel	$489
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Samsung Dm420 /DM-V4 4.1 megapixel	$389/$479
Samsung SCD71 /SCD87 MiniDV	$569/$859
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Samsung 42" PPM42S3 Plasma Screen	$4499
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Philips 107T 17" 1280x1024	$175

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NEC 1860NX 18" 1960NX LCD	$898/899
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NEC ND2500A 4x DVD+/-R/RW IDE	$125
LG 4081b 8X DVD+/-RW Drive IDE Int	$119
LG 4082b 8X DVD+/-RW IDE Int (black)	$148
Pioneer 107(OEM) 8x DVD+/-R	$145
Lite-On 811S 8X DVD+-R/RW	$128

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theBoom® is the first consumer product from established B2B voice recognition technology innovator UmeVoice, Inc. (www.umevoice.com). theBoom is now available for $149.99 at www.theboom.com. theBoom's patented, shaped-based solution virtually eliminates background noises as loud as the New York Stock Exchange trading floor or even a Blackhawk helicopter while permitting clear caller communications. TheBoom, which won accolades in 2003 for the best noise canceling microphone in the marketplace, is now produced with an in-the-ear gel that greatly enhances hearing as well.

Jay L. Pomerantz, an attorney from Menlo Park, CA says: "I truly love this product, as it has enabled me to conduct business with clients in my car without being concerned about noise -- even with the top down! Because I am often driving somewhere, this makes a big difference. "

Even in the loudest of environments, with theBoom attached to any phone, users can converse at comfortable levels (even whisper if necessary!). Gone is the necessity to speak loudly -- or shout -- in order to be heard. Gone is the need to repeat statements theBoom's patented noise cancellation technology makes sure that every word is understood without the interference of background noise.

"theBoom is a natural extension of our technology which was originally developed for Wall Street traders," said Adithya Padala, CEO and founder of UmeVoice, Inc. "These are people who care profoundly about accuracy and intelligibility. Similarly mobile professionals such as salesman, bankers and realtors are constantly on the phone discussing critical matters and clarity is extremely important. theBoom gives the user the Freedom to do business anywhere and do it in a manner that ensures privacy."

A SMART SOLUTION FOR NOISY TIMES...

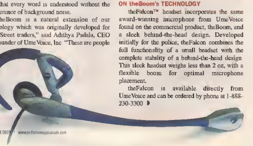
At the heart of "theBoom" is patented technology based on advanced acoustic principles developed by UmeVoice, Inc. This shape-based solution provides a two-port microphone housing which cancels out background noise that hits the front and the back ports. Thus, theBoom prevents the input of noise from a user's environment. The speaker's voice, however, is concentrated on the front port and deflected away from the back port. This enables the microphone to transmit a strong speech signal, devoid of background noise. The result is a dramatic enhancement in clarity that allows a user to speak quietly in 100 decibels of noise and still be heard clearly.

theBoom is available directly from UmeVoice and can be ordered by phone at 1-888-230-3300 or online at www.theboom.com.
For more information, call 415-883-1596 ext. 232

ANNOUNCING theFalcon HEADSET BASED ON theBoom's TECHNOLOGY

theFalcon™ headset incorporates the same award-winning microphone from UmeVoice found on the commercial product, theBoom, and a sleek behind-the-head design. Developed initially for the police, theFalcon combines the full functionality of a small headset with the complete stability of a behind-the-head design. This sleek headset weighs less than 2 oz, with a flexible boom for optimal microphone placement.

theFalcon is available directly from UmeVoice and can be ordered by phone at 1-888-230-3300 ◗



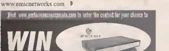
Emic Networks Secures $7.5M in Funding

MySQL Users Conference & Expo 2004, Orlando, FL, April 15, 2004 -- Emic Networks today announced that it has raised $7.5 million of new equity capital in a preferred stock financing. Trident Capital and Nordic Venture Partners jointly led the round, with participation from Ledstiernan. The new financing brings the total capital raised to date to $10 million, including prior funding from Ledstiernan and Aura Capital. The current round of funding will be used to grow the business in the United States and overseas.

"Emic has built a leadership position in the Open Source market through the strength of their management team and by positioning the company as the main source for clustering solutions for leading open source server applications," said Donald R. Dixon, Managing Director at Trident Capital.

"Their solution offers companies the lowest TCO for high-availability database and web enterprise applications, and positions the company for significant growth."

Emic's Application Cluster (EAC) products are designed to provide best price/performance cluster platform for horizontal scaling of Open Source database and Web Enterprise applications. EAC's benefits include performance scalability and load balancing, fault tolerance and high availability with fast fail-over, and centralized cluster management. For more information, visit www.emicnetworks.com ▶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Xincom XC-DPG-402 Twin Wan Router

Filemaker 7 Review

Continued from page 22

field, an action or script could be launched. This feature has been at the top of most developers list for years. For some reason we still didn't get it.

A way to import FileMaker 6 databases would be very useful. It is possible to convert files, but not bring them into an existing database easily. You can also export the data set to Excel, clean it up and then import that data set, but it creates a new database each time you do this, instead of giving the option to import that data AND create a new table into an existing database.

Full control of what appears on the menu bar would be very useful. There are some plug-ins to do this, but it would be great if it were built in.

A more complete separation of data and structure in FileMaker would be ideal. This is useful if you are creating a solution that will be deployed in a number of different locations and are concerned about the ease of updating your solution. It is possible to build databases this way, and in fact, there are much better ways to do this, but it still is not inherent in the program.

Performance issues continue in FileMaker. There is a cost to all the ease of use, and that comes in speed. For many workgroup solutions running on recent Windows or Mac computers, there won't really be an issue. The older the computer and the larger the data set, the more the concern. FileMaker 7 is the first version of a total re-write of the software, so presumably in the coming months, speed tweaks will be come available.

Should you Get It?

If you are a FileMaker developer, either in-house or a consultant, you need to have a look at FileMaker 7. If you are just getting into databases and want to create a solution to organize your business, or organization, definitely get it. The new security model alone is worth the price. If you have a complex FileMaker 6 solution already in place, you may want to try it out (there is a free demo on FileMaker's website), but you should probably read up on all the changes and how they will affect your solution. This is a big jump in functionality and logic, so upgrade with care. ▶

Douglas Alder (Don't send him spam at doug@hbase.net) was the founding editor and publisher of the publication The Computer Paper. He currently does FileMaker consulting and database development as HomeBase Internet. www.hbase.net

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Emerging Cultures: The Evolution of Music Software

Mike Cantelon

The widespread use of home computers to create electronic music has led to an unprecedented explosion of new artists and unusual sounds. As music software is generally cheaper than traditional musical hardware (such as synthesizers, samplers, etc.), people that might never have played with composition and production have been able to create music rather than merely consume it. As a result, new communities of computer musicians have formed and a new market for music composition and sound design software has emerged.

The evolution of music software has gone through several stages. Early music software was used chiefly to sequence music hardware by using MIDI (Musical Instrument Digital Interface: a specification for communication between electronic music devices) to control external "gear". When computers became faster and digital storage became cheaper, the digital recording revolution allowed music software to be used for production as well as sequencing. Later software made an even bolder leap, adding the emulation of music hardware and allowing musicians to have a 'virtual studio" at their disposal. These three generations of music software development allowed new possibilities in music creation, but still primarily imitated the behavior of a hardware-based setup.

The latest generation of music software goes beyond the emulation of the studio, allowing the computer to be used as an instrument in its own right. By not limiting applications to the imitation of existing devices, innovative software developers have harness the innate flexibility of the personal computer. Unlike traditional music hardware, the behavior and interface of a computer can be tailored to the unique style and intentions of artist behind the keyboard.

Wading Into Sound

For all platforms there are options, both commercial and free, for those wishing to experiment with the new breed of audio software. One of the most flexible, albeit most challenging to learn, is Max/MSP, which is available for Macintosh or Windows. Max/MSP is a truly remarkable piece of software that enables realtime processing of audio, MIDI, and even video. Synthesizers, effects, and sequencers can be made entirely in Max/MSP. As a result of the wide array of possibilities, Max/MSP has been a favorite among those on the cutting edge of electronic music production. Max/MSP is not free, but interested parties can get purchasing information at http://www.cycling74.com

Conversely, Ross Bencina's Audiomulch is relatively easy to learn, if less flexible. In beta since 1997, Audiomulch is freely downloadable (http://www.audiomulch.com) and a favorite of experimental electronic musicians. Audiomulch is, unfortunately, only available on the Windows platform.

For those wanting to experiment with the latest developments in audio software, Bidule, a recent beta release by Montreal's Plogue Software, is available for Macintosh or Windows. Bidule's components offer both high-level and low-level functionality, allowing one to either play without investing much time, or to get very involved and experiment with complex tasks such as creating virtual synthesizers, etc. Bidule is available for free download at http://www.plogue.com

For those running Linux, Pure Data is available for download at http://crca.ucsd.edu/~msp/software.html. Pure Data is an open source project with functionality similar to Max/MSP. ◗

Mike Cantelon, aka Bad Feng Shui, is a Vancouver composer/mutilator who has experimented with home computer-based production for nearly a decade. He enjoys skewing unsuspecting forms of music. His work can be heard at http://www.newmusiccanada.com/genres/artist.cfm?Band_Id=4808

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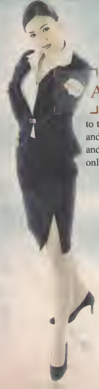

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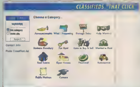
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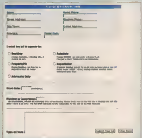
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